



The Easy-Radio Demonstration kit provides a platform for the evaluation, demonstration, test and programming of all Easy-Radio modules.

Transmitters, receivers and transceivers can be plugged into the boards and are provided with an interface to allow communication with a PC serial port. LEDs provide status indication for power, transmitted data (TXD) and received data (RXD).

The kit also contains two ¼ wave flexible whip antennas and two 9 way 'D' cables allowing connection of the boards to PC AT serial (Com) ports. The boards can be powered by either the supplied 9 Volt PP3 batteries or 9 Volt DC Mains adaptors (not supplied).

The CD-ROM contains data sheets and other supporting information together with 'Windows' software that allows key parameters of the modules to be quickly and easily programmed.

Thus within minutes of opening the box the benefits of Easy-Radio can be demonstrated.

Board Layout

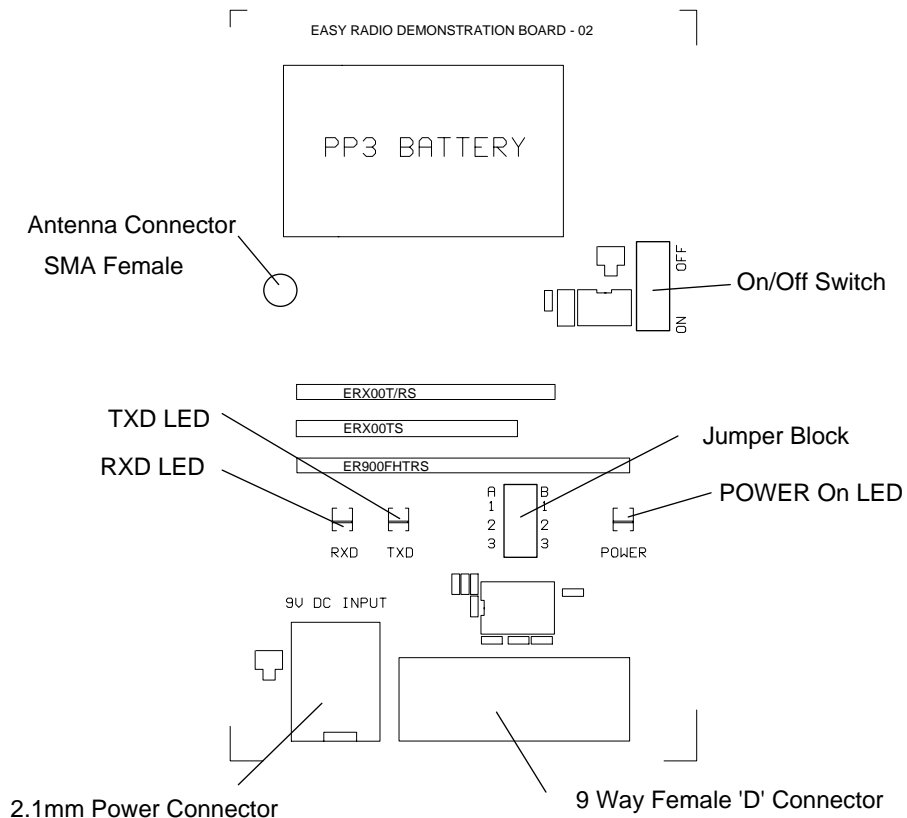


Figure 1 Board Layout

Schematic

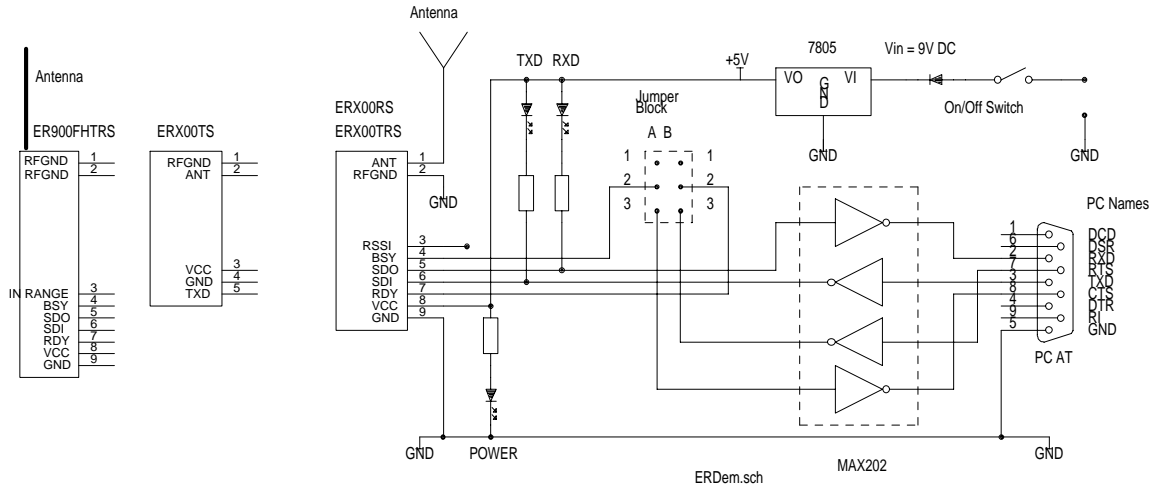
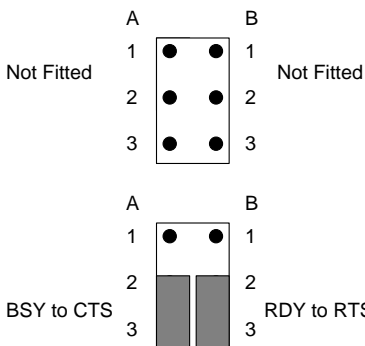


Figure 2 Schematic Diagram

The schematic is diagrammatic and does not show the detailed circuitry.

Jumper Block

A 6 pin jumper block is fitted to the board. It comprises two columns of pins, A & B and the supplied jumpers should only be fitted North-South linking either Pins 1-2 or Pin 2-3 on each column as shown below. The jumpers should not be fitted East-West.



No Handshaking

In this configuration hardware handshaking is disabled.

Handshaking Enabled

In this configuration hardware handshaking is enabled. The BSY output is connected (via logic to RS232 level translator) to CTS and RDY input is connected to RTS output.

Module Pin Descriptions – See Specific Data Sheets for further description.

Name	Description	Notes
ANT	I/O	Antenna – RF Input or Input/Output for Txcvrs
RF GND	Input	RF Ground. Connect to ground plane and supply 0 Volt
RSSI	Output	Received Signal Strength Indicator
BSY	Output	Low – Device is Ready to receive data from Host High - Device is Not Ready to receive data from Host
SDO	Output	Serial Data Output from Device to Host
SDI	Input	Serial Data Input from Host to Device Connect to Vcc (High) if not used.
RDY	Input	Low - Host is Ready to receive data from Device High - Host is Not Ready to receive data from Device Connect to 0 Volt (Ground) if not used
Vcc	Input	Positive supply pin
GND	Input	Connect to supply 0 Volt and ground plane

Hardware Notes

- Fit only ONE module to each board – either a transmitter, receiver or a transceiver. These should match in frequency band and be type compatible.
- Do not fit (or remove) modules when the board is powered.
- The supplied serial cables are 9 way 'D' Type Male to Female, 1:1 (not cross-over type).
- Regularly check the voltage of the batteries. For extended testing it may be wise to use 9 Volt DC power supplies (200mA) which should be fitted with 2.1mm connectors (+ve centre, -ve Ring).
- The supplied antennas should match the modules in frequency (400MHz or 900MHz) and are fitted with male SMA connectors that mate with the female SMA board connectors.

Easy-Radio Development & Programming Software

This software enables Easy-Radio modules to be configured with key operating parameters and allows demonstration of simple data transfer over radio.

Two PCs running 'Windows' are required for testing. They should initially be positioned adjacent to each other so that both screens and keyboards can be viewed simultaneously. Use of a laptop PC simplifies later range testing.

- Check that 'matching' Easy-Radio modules are fitted to the demonstration boards. (Only one module per board)
- Position the jumpers correctly – see diagram above.
- Connect the supplied ¼ wave whip antennas.
- Connect boards to PC serial ports using the supplied 9 way 'D' Type 1:1 connecting cables. Note the physical Com port used. (Com1 - preferred default).
- Power the boards from either batteries or mains power supplies and switch the power switch to the 'ON' position, the blue POWER LED should light.

The LPRS Easy Radio CD-ROM will contain the latest version of evaluation software. However the LPRS website should be checked regularly for updates. Currently the following operating systems have been tested for use with the software: Windows 95, Windows 98, Windows ME, Windows 2000 & Windows XP. Mac & Linux machines are not yet supported.

Setup is automatic and on screen prompts will assist in initial settings.

Product Order Codes

Description	Order Code
Easy-Radio Demonstration Kit c/w Antennas & Serial Cables	
... with 1 x ER400TS-02 and 1 x ER400RS-02	ERKIT -400TS/RS - 02
... with 2 x ER400TRS-02	ERKIT -400TRS - 02
... with 1 x ER900TS-02 and 1 x ER900RS-02	ERKIT -900TS/RS - 02
... with 2 x ER900TRS-02	ERKIT -900TRS - 02

Document History

Issue	Date	Revision
1-0	July 2002	Preliminary
1-1	March 2004	Updated drawings and software descriptions/commands
2-0	September 2005	Removed Software instruction detail as this is now available using the software's help system.

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The above address is a dedicated web site for Easy-Radio